

Patent Claims

1. A polymer composition, suitable for producing car body trimming parts, wherein the composition has a deflection of less than 15mm when subjected to a heat sag test at 250°C over a period of 30 minutes.
2. The polymer composition, comprising
 - (A) a polyamide
 - (B) a syndiotactic monovinyl aromatic homo-polymer or copolymer;
 - (C) a polystyrene copolymer or polystyrene graft copolymer;
 - (D) an impact resistance modifier.
3. The polymer composition as defined in claim 2, wherein the component (A) is selected from the group polyamide 6, polyamide 66, polyamide 46, polyamide MXD6, or a mixture of these polyamides.
4. The polymer composition as defined in claim 2, wherein the component (B) is a syndiotactic polystyrene homo-polymer or copolymer with 80-100% syndiotactic diades, an average molecular weight of 50,000 to 2,500,000 and a melting point of 160 to 310 °C.

5. The polymer composition as defined in claim 2, wherein the component (C) is selected from the group poly(styrene-co-acrylnitrile); poly(styrene-co-methylvinyloxazoline); poly(styrene-co-maleic acid anhydride); poly(styrene-co-methylvinyloxazoline-co-acrylnitrile); poly(styrene-co-maleic acid imide) copolymer or a mixture of these copolymers.
6. The polymer composition as defined in claim 2, wherein the polystyrene grafted copolymer in the component (C) is generated from syndiotactic polystyrene by grafting on maleic acid anhydride or ithaconic acid anhydride or (meth)acrylic acid and their esters.
7. The polymer composition as defined in claim 2, wherein the component (D) is selected from the group mixed polymers of the butadien and/or isoprene with styrene and other co-monomers, hydrated products and/or products created through grafting with maleic acid anhydride, ithaconic acid anhydride, (meth)acrylic acid and their esters; non-polar or polar olefin homo-polymers and copolymers created through grafting with maleic acid anhydride, ithaconic acid anhydride, (meth)acrylic acid, and their esters, or carbonic acid functionalized copolymers such as poly(ethene-co-(meth)acrylic acid) or poly(ethene-co-1-olefin-co-(meth)acrylic acid), wherein the acid groups are partially neutralized with metal ions.

8. The polymer composition as defined in claims 2 and 5, wherein the component (C) is a poly(styrene-co-maleic acid imide) copolymer with a maleic acid anhydride groups rest which has not undergone reaction.
9. The polymer composition as defined in claim 8, wherein the share of the maleic acid anhydride groups which has not undergone reaction ranges from 0.1 to 10 mol% for the poly(styrene-co-maleic acid imide) copolymers.
10. The polymer composition as defined in claims 8 and 9, wherein the glass transition temperature for the poly(styrene-co-maleic acid imide) copolymers is between 150 and 195°C.
11. The polymer composition as defined in one of the preceding claims, additionally comprising the admixture of up to 200 weight %, relative to the component (A), in the form of up to 5 weight percentages auxiliary sliding and processing agents, up to 5 weight percentages pigments, up to 2 weight percentages nucleation agents, up to 1 weight percentage stabilizers, up to 2 weight percentages expanding agents, up to 2 weight percentages antistatic agents, up to 100 weight percentages processing oils, up to 100 weight percentages filler materials and/or flame-retarding agents.

12. The polymer composition as defined in claims 2 to 10, wherein the composition additionally contains glass fibers.
13. The polymer composition as defined in claims 2 to 11, wherein the composition additionally comprises conductive additives.
14. The polymer composition as defined in claim 13, wherein the conductive additive is conductive soot, having particle sizes ranging from 10 to 60nm, a nitrogen adsorption between 30 and 1500 m²/g, and a dibutylphthalat adsorption between 40 and 450 cm³/100g.
15. The polymer composition as defined in claim 1, wherein the polymer composition is the same as defined in claims 2 to 14.
16. The use of a polymer composition as defined in claims 2 to 15 for producing body trimming parts for the manufacture of automobiles.
17. Car body trimming parts according to one of the claims 1 to 16, wherein these body trimming parts comprise fenders, bumpers, side panels, tank flaps, sill boards and/or outer door shells.

18. The production of car body trimming parts according to one of the claims 1, 16, and 17, using the injection-molding technique and/or the gas inside pressure technique.

Rehau, 05.02.2002

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